

REMARKS/ARGUMENTS

Claims 1-9 and 12-20 are pending in this application. Claims 10 and 11 had been previously withdrawn. New claims 15-20 have been added. Support for the addition of these claims is found in the specification page 3, line 26 to page 4, line 6, and in original claims 1-9.

Claims 1-9 and 12-14 are rejected in the final office action of March 6, 2003 under § 103(a) as unpatentable over Stoltz (U.S. Pat. No. 5,650,185) in view of Fennema (article from Food Chemistry, Third Ed.) and Patel *et al.* (U.S. Pat. No. 5,135,011). To combine references under § 103, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the reference teachings." MPEP 2145 X. C. There is no suggestion or motivation to combine within the cited references. Furthermore, combination of the secondary references with the primary reference would render the oil of the primary reference unsuitable for its purpose.

Stoltz discloses flavored oils comprising oil and a flavorant, which imparts a specific flavor to the oil. The or flavorants taught in Stoltz are oil-soluble flavorants, which are dissolved in oils for the purpose of adding particular flavor to foods, such as butter flavor, garlic flavor, herb flavor, meat flavor, or fish flavor. See, e.g., Stoltz, column 9, lines 12-13, 16-18, 55-56; column 10, lines 14-17, 30-32, 61-62; and claims 1, 9, 10, 11, 12, 13, 16, 18, and 19, each teaching the use of oil-based, i.e., oil-soluble, flavorants in oil. Nowhere does Stoltz teach or suggest using anything other than an oil-soluble flavorant with the oils of his invention.

Fennema discusses different known flavor enhancers. Fennema also differentiates between "flavoring agents," or flavorants which include essential oils, herbs and spices, plant extractives, and synthetic flavor compounds; and "flavor potentiators" or flavor enhancers such as disodium guanylate, disodium inosinate, maltol, and monosodium glutamate. See, Fennema, page 816, Table 5. Nowhere does Fennema teach or suggest that "flavor agents" are interchangeable with "flavor potentiators." Rather, from the teachings, of Fennema, it is clear that "flavor agents" add flavors to foods, while "flavor potentiators" do not add much, if any, flavor, but interact with the flavors in the foods synergistically, to enhance the flavors that are already in the food itself. Furthermore, it is seen that "flavor agents" are generally oils, while "flavor potentiators" are generally sodium salts.

Patel *et al.* is cited as disclosing a flavoring composition comprising silicon dioxide, wherein the silicon dioxide is used as a thickener. While Patel *et al.* does teach the use of silicon dioxide as a thickening agent when preparing flavorants for chewing gum, it does not teach or suggest that silicon dioxide is suitable as a thickening agent for dispersing water-insoluble particles in oil.

Not only is there no suggestion or motivation to combine Stoltz, Fennema and Patel *et al.*, there is no reasonable expectation of success. There is no reasonable suggestion that one could suspend water-soluble flavor enhancers in an oil. Furthermore, combining the teachings of Fennema and Patel *et al.* with those of Stoltz would render the oils of Stoltz unsuitable for their intended purpose.

Examiner states that Stoltz "clearly teaches the use of a flavor enhancer formulation comprising oil and a flavor dispersed through the oil as stated above. Stoltz does not exclude water soluble flavors." First, nowhere does Stoltz teach anything but oil-soluble flavorants. Nowhere does Stoltz teach or suggest the use of "flavor enhancers." Stoltz does generally teach "flavorants." **Applicants are not claiming oils containing "flavorants."** Applicants are claiming flavor-enhancing oils comprising: at least one edible oil; a matrix-forming agent comprising silicon dioxide; and a flavor-enhancing amount of at least one **water-soluble particulate flavor enhancer**. As taught in the Fennema reference cited by the Examiner, flavorants are different from flavor enhancers. Flavorants, which are generally oils, herbs, spices, plant extractives, impart a particular flavor, *i.e.* butter, garlic, mint, *etc.* Flavor enhancers, in contrast, augment the flavor, add a savoriness to the flavor already contained within the food, rather than add a flavor. Furthermore, flavor enhancers are generally sodium salts, as shown in Fennema. Applicants' invention is for "flavor-enhancing oils," which are oils containing water-soluble particulate flavor enhancers—not "flavored oils," which are oils that contain oil-soluble flavorants.

Second, Stoltz is directed to flavored a "Non-Aerosol, Uniform Spray Dispersion System." If anything, that suggests that the **flavorants** added to the oil should be soluble in the oil for best performance of the non-aerosol spray dispersion system. The oils of Stoltz must be suitable for delivery through a sprayer. Stoltz states in column 2, at lines 49-51, that "it has been found that in order to attain the desired uniform spray, a ***particular general composition must be employed*** along with a specific type of pump." (Emphasis added). Stoltz states that the oils must have a particular general composition in order for the invention to work. Stoltz nowhere discloses adding an insoluble particulate to oils. Moreover, particulates in the oil, which is the necessary result of adding water-soluble, *i.e.* oil-insoluble, particles to an oil, would be inconsistent with the purpose of the Stoltz patent—to have an oil suitable for being delivered through a sprayer. The oils would be rendered unsuitable for their stated purpose.

Third, if the **oil-based flavorants** taught in Stoltz were substituted with the **water-soluble flavor-enhancers** claimed by Applicants, the **water-soluble flavor enhancers** would not be suspended throughout the oil. See Applicants' specification, page 5, lines 26-27. Stoltz clearly does not teach **water-soluble flavor enhancers** dispersed throughout oil.

Finally, if the oils of Stoltz were gelled, or thickened, such that a **water-soluble flavor enhancer** could be dispersed throughout the oil, they would certainly render the oil unsuitable for its intended purpose. Stoltz states that the oils must have a particular general composition. Stoltz teaches that the oils should have specific viscosities, in the range from 20-60 cps. Clearly, forming a gel would make the oils unsuitable for a spray-dispersion system.

Finally, the Examiner has cited **In re Levin**, 84 USPQ 232 and the cases cited therein, **In re White**, and **In re Mason**. Applicant notes that the CCPA held that the invention claimed in each of these cases did not possess characteristics that were new or materially different from the properties of the individual ingredients. Applicants have, however, shown in their specification that their inventive flavor-enhancing oils have produced a new, unexpected, and useful function. Namely, the flavor-enhancing oils of the present invention allows greater flavor enhancement than can otherwise be provided. Applicants first note that since flavor enhancers generally come

in the form of powders that are solubilized in foods having an aqueous phase. (Page 1, lines 32-33.) Water-soluble flavor-enhancers provide even more flavor enhancement when heated to relatively high cooking temperatures. (Page 1, lines 36-37.) When in the aqueous phase, however, this enhancement cannot be achieved because the temperature is limited by the boiling point of water, 100°C, while the extra enhancement only occurs at higher temperatures. (Page 1, line 38 to Page 2, line 8.) Furthermore, there has been no practical way to even disperse these water-soluble flavor-enhancers in cooking oils, in order to obtain the extra enhancement achieved at higher temperatures. (Page 2, lines 5-9).

Applicants' invention overcomes this problem by uniformly distributing the water-soluble flavor enhancers in an oil. Since the water-soluble flavor enhancers are not contained in an aqueous phase, they are not limited by the lower boiling temperature of water, and are thus able to give greater enhancement than would otherwise be achieved. As explained in the specification, however, the preparation of the oil base gel is critical to obtaining a stable finished product where the solids do not separate from the liquid phase. (Page 5, lines 31-33.) Accordingly, the flavor enhancing oils claimed by Applicants do possess characteristics that are new and materially different than the characteristics of the individual parts. Applicants' claimed flavor-enhancing oils are able to provide more flavor-enhancement than the individual ingredients would be able to provide.

In light of the remarks made herein, Applicants submit that the present invention is not obvious over Stoltz in view of Fennema and Patel *et al.* Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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